

Appl. No. 10/018,606
Amdt. dated December 23, 2004
Reply to Office action of August 23, 2004

In the Claims:

Claims 1, 13, 15 and 16 are amended herein. The remaining claims are not amended in this response.

1. (currently amended) An inductor element comprising two conductors, characterized in that the two conductors having corresponding shape are formed in piles on a substrate, the two conductors being insulated one from the other and are connected with each other at one opposite end, wherein one conductor being apart from the substrate is used as an inductor conductor, the other conductor being interposed between the inductor conductor and the substrate, and a conductive lead wire of the inductor conductor extending between the other conductor, and the substrate, the other conductor having an unconnected end.

2. (previously presented) The inductor element according to claim 1, characterized in that three or more metal layers are formed on the substrate, and the two conductors and the lead wire are formed respectively by patterning the metal layers, the metal layers having other layers respectively therebetween.

3. (previously presented) The inductor element according to claim 1, characterized in that the two conductors are connected at opposite ends with the lead wire.

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4. (original) The inductor element according to claim 1, characterized in that the two conductors have substantially the same shape.

5. (original) The inductor element according to claim 1, characterized in that the two conductors have long shapes, and one end of one conductor in a longitudinal direction is connected with one end of the other in the longitudinal direction.

6. (previously presented) The inductor element according to claim 1, characterized in that the two conductors have circular shapes less than one turn, and one end of one conductor is connected with one end of the other conductor.

7. (previously presented) The inductor element according to claim 1, characterized in that the two conductors have spiral shapes each number of turns of which is one or more, and one end of one conductor is connected with one end of the other conductor.

8. (previously presented) The inductor element according to claim 1, characterized in that the two conductors each have a spiral shape having one or more turns, opposite ends are mutually connected, and also, the lead wire led from the inner circumferential end of the inductor conductor is made to pass between the other conductor and the substrate.

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9. (previously presented) The inductor element according to claim 1, characterized in that the two conductors are formed in substantially linear shapes, and one end of one conductor is connected with one end of the other conductor.

10. (previously presented) The inductor element according to claim 1, characterized in that the two conductors are formed in meander shapes, and one end of one conductor is connected with one end of the other conductor.

11. (original) The inductor element according to claim 7, characterized in that an inner end of the one conductor is connected with an outer end of the other conductor.

12. (original) The inductor element according to claim 1, characterized by further comprising:

an inductance component of the inductor element; and
a capacitance component between the two conductors.

13. (currently amended) An inductor element comprising two conductors, characterized in that the two conductors having corresponding shape are formed in piles on a substrate the two conductors are insulated one from the other, and are connected with each other at one opposite end, wherein one conductor apart from the substrate is used as an inductor conductor, and further, an end of the other conductor not connected to the inductor conductor is terminated with a predetermined variable impedance

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element so that it is possible to change at least one device constant of resistance, capacitance or inductance in the impedance element, and termination conditions are changed by changing the device constant.

14. (canceled).

15. (currently amended) The inductor element according to claim 13, characterized in that the substrate is a semiconductor substrate, and the variable impedance comprises a capacitor that is formed of a variable capacitance diode made of a semiconductor layer formed in the inside or outside of the semiconductor substrate.

16. (currently amended) The inductor element according to claim 13, characterized in that the substrate is a semiconductor substrate, and the variable impedance comprises a resistor that is formed of a channel of an FET made of a semiconductor layer formed in the inside or outside of the semiconductor substrate.

17. (original) The inductor element according to claim 13, characterized in that the two conductors have substantially the same shape.

18. (original) The inductor element according to claim 13, characterized in that the two conductors have long shapes, and

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one end of one conductor in a longitudinal direction is connected with one end of the other in the longitudinal direction.

19. (original) The inductor element according to claim 13, characterized in that the two conductors have circular shapes less than one turn, and one end of one conductor is connected with one end of the other.

20. (original) The inductor element according to claim 13, characterized in that the two conductors have spiral shapes each number of turns of which is one or more, and one end of one conductor is connected with one end of the other.

21. (original) The inductor element according to claim 13, characterized in that the two conductors are formed in substantially linear shapes, and one end of one conductor is connected with one end of the other.

22. (original) The inductor element according to claim 13, characterized in that the two conductors are formed in meander shapes, and one end of one conductor is connected with one end of the other.

23. (original) The inductor element according to claim 20, characterized in that an inner end of the one conductor is connected with an outer end of the other conductor.

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24. (original) The inductor element according to claim 13, characterized by further comprising:

an inductance component of the inductor element; and
a capacitance component between the two conductors.

25. (previously presented) An inductor comprising: a pair of conductors, the first conductor having a first and second termination and a middle portion between said first and second termination, said middle portion functioning as an inductor conductor, a second conductor below the first conductor being substantially the same shape as said first conductor, said second conductor connected to said first conductor at one end thereof, said first conductor having a lead portion between one of said first and said second terminations and said middle portion, said lead portion and said second conductor and said first conductor being respectively stacked in a stacked arrangement on a substrate with said lead portion being between said substrate and said second conductor, each of said lead portion and said second conductor and first conductor being insulated from each other.

26. (previously presented) An inductor according to claim 25 wherein said second conductor has a second end being connected to one of a variable capacitance diode and a FET.